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| Titolo | Mechatronic Systems: Theory and Applications : Proceedings of the Second Workshop on Mechatronic Systems JSM'2014 / / edited by Mohamed Slim Abbes, Jean-Yves Choley, Fakher Chaari, Abdessalem Jarraya, Mohamed Haddar |
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| Descrizione fisica | 1 online resource (175 p.) |
| Collana | Lecture Notes in Mechanical Engineering, , 2195-4356 |
| Disciplina | 621 |
| Soggetti | Mechatronics<br>Engineering design<br>Mechanics<br>Mechanics, Applied<br>Manufactures<br>Tribology<br>Corrosion and anti-corrosives<br>Coatings<br>Engineering Design<br>Solid Mechanics<br>Manufacturing, Machines, Tools, Processes<br>Tribology, Corrosion and Coatings |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references at the end of each chapters. |
| Nota di contenuto | Multidisciplinary Optimization of Mechatronic Systems: Application to an Electric Vehicle -- Influence Topological approach for the modeling of complex and Mechatronic systems -- Instrumentation of back to back planetary gearbox for dynamic behavior investigation -- Experimental study of bolted joint self loosening under transverse load -- Granular material for vibration suppression -- Influence of trust evolution on cost structure within horizontal collaborative networks -- Multi-objective optimization of a multi-site manufacturing network -- |

Influence of processing parameters on the mechanical behavior of CNT/epoxy nanocomposites -- A polynomial chaos method for the analysis of uncertain spur gear system -- Non-linear stiffness and damping coefficients effect on a high speed AMB spindle in peripheral milling -- Generalized polynomial chaos for the dynamic analysis of spur gear taken into account uncertainty -- Modelling and simulation of the doctors' availability in emergency department with SIMIO Software. Case of study: Bichat-Claude Bernard Hospital -- FGM shell structures analysis using an enhanced discrete double directors shell element -- Modal analysis of helical planetary gear train coupled to bevel gear -- Dynamic Characterization of Viscoelastic Components.

Sommario/riassunto

The book offers a snapshot of the state-of-art in the field of model-based mechatronic system design. It covers topics including machine design and optimization, predictive systems in manufacturing networks, and the development of software for modeling and simulation of processes, which are supplemented by practical case studies. The book is a collection of fifteen selected contributions presented during the Workshop on Mechatronic Systems, held on March 17-19, 2014, in Mahdia, Tunisia. The workshop was jointly organized by the Laboratory of Mechanics Modeling and Production (LA2MP) of the National School of Engineers Sfax, Tunisia, and the Laboratory for Mechanical Systems and Materials Engineering (LISMMA) of Higher Institute of Mechanics (SUPMECA), Paris, France.